

respective parent claims. Claim 14 has been amended to recite another feature of the invention. Claim 20 has been amended to be dependent on Claim 19. Claims 1-22 remain pending in this application.

In a separate Letter To Official Draftsman, applicant has requested an amendment of Figure 6 to correct an error in a reference numeral. The Examiner's review and approval of the proposed amendment is requested.

In the Official Action, Claims 1-22 were rejected under 35 U.S.C. §112 as indefinite. The Examiner's §112 rejection appears to be based on a reading of the claim language to encompass both stationary and pivotally mounted blade units. In response to the §112 rejection, applicant notes that Claim 1 was intended to define a razor including a blade unit carrying structure in which a blade unit is either "permanently or detachably" mounted for pivotal movement relative to the blade unit carrying structure about a predetermined pivot axis. Claim 1 was not intended to cover a razor with a stationary blade unit.

Applicant has amended Claim 1 to encompass only the pivotal mounting of the blade unit on the blade unit carrying structure and to avoid any suggestion that the blade unit is mounted in a stationary position on the blade unit carrying structure. Claims 11 and 12 have been similarly amended. Further, Claim 1 has been amended to recite that (1) the predetermined pivot axis extends longitudinally through the blade unit and that (2) the discharge port has an opening located at or close to the predetermined pivot axis for discharging the fluid to the blade unit at or near the pivot axis. Applicant believes that the amended claims overcome the objections stated by the Examiner and respectfully requests the §112 rejection to be withdrawn.

In the Official Action, the Examiner rejected Claims 1-7, 9-15 and 8-22 under 35 U.S.C. §102(b) as anticipated by Hackmyer 3,726,009. The Examiner stated that Hackmyer meets the alternate limitation of "is mounted", but not "mounted for pivotal movement". The Examiner's comment appears to be based

on the assumption that "is mounted" was meant to refer to "stationary" mounting of the blade unit on the blade unit carrying structure. However, as noted above, this was not the original intent of the claims. Moreover, Claims 1, 11 and 12 have been amended to recite that "a blade unit is permanently or detachably mounted for pivotal movement relative to the blade unit carrying structure about a predetermined pivot axis" so that only a pivotal mounting arrangement is covered by the claims.

Further, in contrast to the Hackmyer disclosure, amended Claim 1 recites that the discharge port has an opening located at or close to the predetermined pivot axis for discharging a fluid to the blade unit at or near the predetermined pivot axis. In the present disclosure, the opening of the discharge port corresponds to the discharge end 45 of delivery tube 44 which is located at or near the predetermined pivot axis 14 about which the blade unit 1 pivots relative to the blade unit carrying structure 2. The predetermined pivot axis 14 extends longitudinally through the blade unit 14 at a position remote from the valve member 24.

Hackmyer discloses a shaver 20 comprising an aerosol lather dispenser 21, a blade and guard unit 22, and a holder 23 for the blade and guard unit 22. The blade and guard unit 22 is fixed on the holder 23 and is not pivotal relative to the holder 23. The dispenser 21 includes a tilt-to-dispense valve assembly 24 including a valve stem 25 on which the holder 23 is mounted. The holder 23 and the blade and guard unit 22 are movable together as a unit relative to the aerosol container 21 by virtue of the tilting action of the valve assembly 24.

In Hackmyer, the only pivotal motion that occurs is the result of the tilting of the holder 23 and valve assembly 24 relative to the dispenser 21. In contrast to Claim 1, the blade and guard unit 22 is not pivotable relative to the holder 23 about a predetermined pivot axis extending longitudinally through the blade and guard unit 22. Instead when the valve assembly is tilted, the blade and guard unit 22 and the holder 23 pivot as a unit about a pivot point located at the valve assembly 24. In

view of these distinctions, applicant believes that Claim 1 is not anticipated by the Hackmyer disclosure and requests the §102 rejection to be withdrawn.

Claim 11, like Claim 1, defines a razor comprising a blade unit carrying structure on one end of which a blade unit is permanently or detachably mounted for pivotal movement relative to the carrying structure. Claim 12 defines a razor blade carrying structure in similar terms. As noted above, Hackmyer does not disclose a razor in which the blade unit is mounted for pivotal movement relative to the carrying structure. Instead, the blade and guard unit 22 is rigidly attached to the holder 23. Accordingly, applicant believes that Claims 11 and 12 are not anticipated by the Hackmyer disclosure and requests the §102 rejections to be withdrawn.

In the Official Action, Claim 8 was rejected under 35 U.S.C. § 103(a) as obvious over Hackmyer in view of Gruslin et al 6,349,471. The Examiner relied on Gruslin et al for disclosure of an elastomeric skin contacting element. Applicant notes that the Gruslin et al patent has a filing date of July 19, 2000 which is later than the filing date of International Application No. PCT/GB00/00480 filed on February 14, 2000. Since the present application is a continuation of the PCT application and entitled to the benefit of the PCT filing date, applicant submits that the Gruslin et al patent is not available as a prior art reference because it was filed after the PCT application.

Further, regarding Claim 8, applicant notes that the claim recites that the discharge port is defined by a tubular member and the blade unit includes an elastomeric skin contacting element having a lip surrounding and sealing against the tubular member adjacent the discharge port. These limitations are not disclosed or suggested by the Gruslin et al patent. Accordingly, applicant requests that the §103 rejection of Claim 8 be withdrawn.

Claim 14 as amended specifies that the blade unit carrying structure and the supporting structure are integrally connected by at least one flexible web which defines a second pivot axis about which the blade carrying structure is pivotable

relative to the supporting structure. Hackmyer discloses only one pivot action at the tilt valve assembly 24. In contrast to Hackmyer, Claim 14 contemplates two pivot actions, i.e., the pivotal movement of the blade unit relative to the blade unit carrying structure about the first predetermined pivot axis and the pivotal movement of the blade carrying structure relative to the supporting structure about the second pivot axis. Since Hackmyer does not disclose the claimed pivot actions, applicant believes that Claim 14 defines patentable subject matter over Hackmyer.

In the Official Action, Claims 16 and 17 were rejected under 35 U.S.C. §103(a) as obvious over Hackmyer in view of Miyauchi 3,417,468. Applicant notes that Miyauchi does not disclose the claimed features of amended Claim 1 discussed above. Accordingly, applicant believes that Claims 16 and 17 define patentable subject matter over the cited reference.

For the foregoing reasons, applicants submit that the amended Claims 1-22 define patentable subject matter and respectfully request allowance of these claims in this case.

Respectfully submitted,



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an opposite end of the blade unit carrying structure being hingedly connected to a supporting structure, a delivery system for conducting a fluid to the blade unit from a reservoir, the delivery system including a valve for controlling supply of fluid to the blade unit, the blade unit carrying structure being coupled to the valve for the valve to be actuated by displacement of the blade unit carrying structure relative to the supporting structure caused by pressing the blade unit against the skin during shaving, and the blade unit carrying structure being resiliently biased to close the valve when the blade unit is lifted clear of the skin.

A preferred razor according to the invention embodies both aspects described above. By the valve being actuated by movement of the blade unit carrying structure brought about by pressing the blade unit against the skin it can be ensured that fluid is delivered precisely when and where it is needed or desired, such as immediately in front of the blade(s) of the blade unit, and the user is not required to perform any additional operation in order to open the control valve. Nonetheless, the blade unit carrying structure can be adapted also to allow direct manual operation of the control valve by the user to provide for greater flexibility in use. The blade unit carrying structure is conveniently movably connected to a supporting structure, more especially integrally hingedly coupled to the supporting structure by one or more flexible webs. The reservoir is preferably constituted by a container to which the supporting structure, conveniently having the form of a ring, is attached, for example by friction or a snap-fit connection with a rim of the container. The blade unit carrying structure may comprise a hollow stem extending upwardly from a flange-like base which is connected to the supporting ring by a pair of laterally opposed web hinges and the base can define a finger button at which the base can be engaged and be depressed by a finger of the user to open the valve.

In conformity with the foregoing the invention also provides a razor or

razor blade unit carrying structure [as defined in claim 13] wherein the blade unit carrying structure and the supporting structure are integrally connected by at least one flexible web.

The invention described herein is applicable, in its various novel aspects, to razors intended for shaving the face as well to razors, e.g. as commonly used by women, for shaving other areas of the body such as the legs.

A complete understanding of the invention will be gained from the more detailed description which follows and in which reference is made to the accompanying drawings, wherein:-

Figure 1 is an axial cross section through a safety razor embodying the invention;

Figure 2 is an enlarged isometric view showing the blade unit of the razor and its carrying structure;

Figure 3 is a view similar to Figure 2, but showing the blade unit in a different pivotal position on the carrying structure;

Figures 4 and 5 are enlarged axial cross-sections through the upper parts of the razor as shown in Figures 2 and 3 and respectively showing the valve closed and open;

Figure 6 is an axial cross section through another embodiment of a razor in accordance with the invention;

Figure 7 shows on a larger scale the part of the razor shown circled in Figure 6;

Figure 8 is a view corresponding to Figure 7 but showing the blade unit pivoted to a position of maximum pivotal displacement;

Figure 9 shows the blade unit of Figures 6-8 in plan view; and

Figure 10 is a transverse cross section through the blade unit.